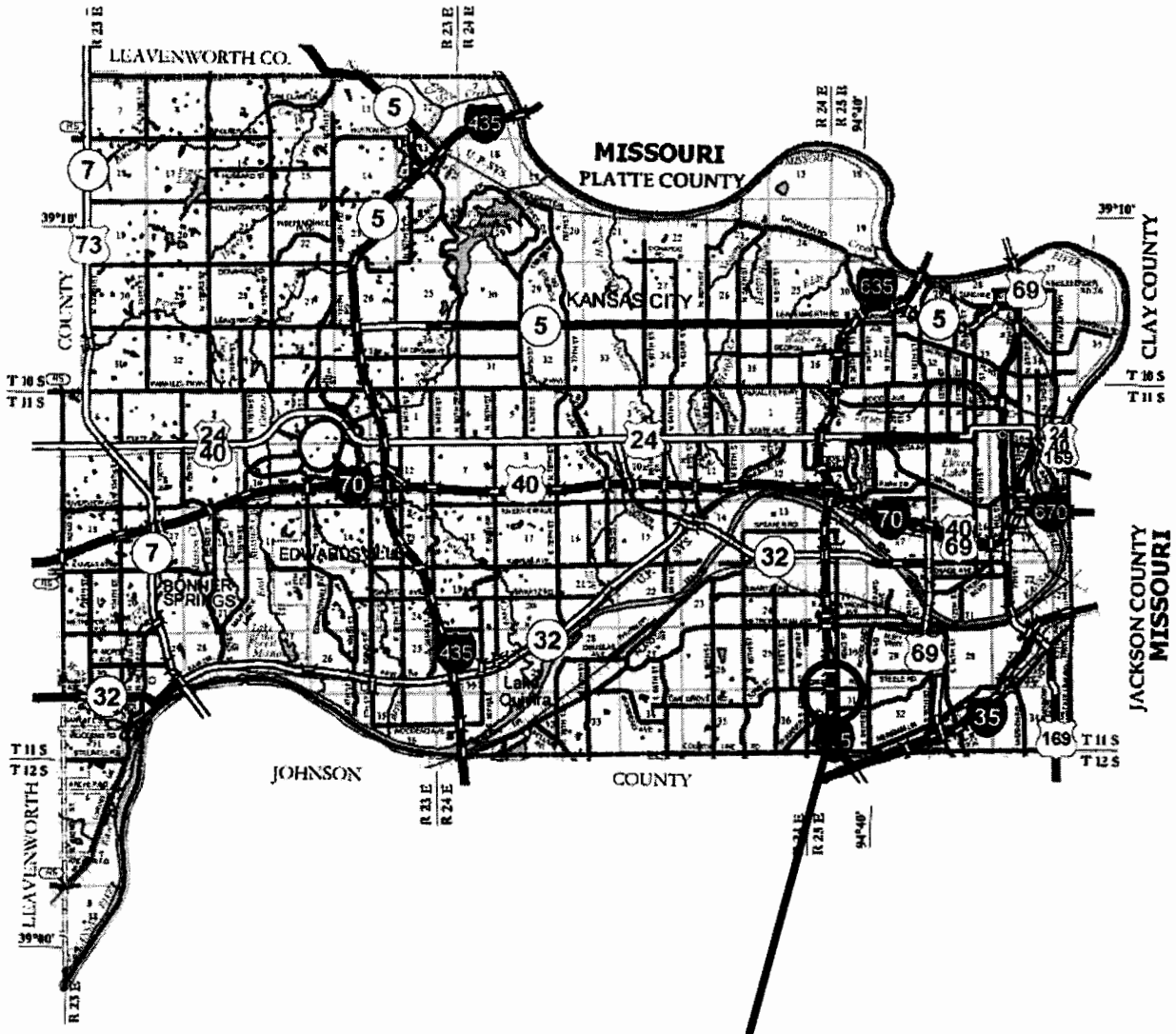

635-105 KA-2093-01 Gibbs Rd. over I-635

1.43 miles North of I-35

Wyandotte County

CD 01

N: 39.058622 E: -94.679289 (Approximate)

SE ¼, SE ¼, SW ¼, Sect 30, T11S, R25E

9/4/2012

KANSAS DEPARTMENT OF TRANSPORTATION

Kansas Department of Transportation

RTE./CO.	I-635 / Wyandotte	SOUNDING NO.	CD 01	SHEET 1 of 4	
BRIDGE STA.	154+97.14	PROJ. NO.	635-105 KA-2093-01	BRIDGE NO.	1.05(326)
SITE NAME	Gibbs Rd over I-635			HOLE STA.	50+75, 47.0' Rt CL
GEOLOGIST	R. Crow, P.G.	SCALE 1 inch = 5.0 feet		DATE	September 4, 2012
DRILLER	R. Vervynck	RIG TYPE	CME 55	TOP HOLE ELEV.	1007.8
GW ELEV.	980.6	TOTAL DEPTH	80.9	M/B ELEV.	1005.8

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	N60 COUNT (SPT)	ELEVATION
8" Hollow Augers				1007.8	Silty clay, brown, moist				
	Plattsburg LS	1	2.0	1005.8	Shale, very limy, gray	36	1.78E+07		1001.2
		2	8.6	999.2	Shale, gray, clayey, sandy, occasionally limy	79	1.06E+07		997.9
			11.2	996.6	Shale, greenish gray				
NQ2 Diamond	Bonner Springs Shale Formation	3	14.4	993.4	Shale, gray, sandy, clayey, somewhat mushy	55	1.75E+07		991.5
		4				10	810000		986.4
		5	22.8	985.0	Shale, light & dark gray varves, laminar	29	2280000		981.8
		6							

1005 1000 995 990 985 980

BOREHOLE REPORT - KANSAS DOT.GDT - 9/24/12 11:34 - Q:\GEOLOGY\BRIDGE\635-105 KA-2093-01\GIBBS RD OVER 635.GPJ

KANSAS DEPARTMENT OF TRANSPORTATION

Kansas Department of Transportation

RTE./CO.	I-635 / Wyandotte	SOUNDING NO.	CD 01	SHEET 2 of 4	
BRIDGE STA.	154+97.14	PROJ. NO.	635-105 KA-2093-01	BRIDGE NO.	1.05(326)
SITE NAME	Gibbs Rd over I-635			HOLE STA.	50+75, 47.0' Rt CL

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	N60 COUNT (SPT)	ELEVATION
NQ2 Diamond	Farley Limestone Member	6		975	Shale, light & dark gray varves, laminar	56	5330000		976.2
		7				38	3300000		973.8
			36.6	971.2	Limestone, fine, hard, light gray, fossiliferous	1080	2.69E+08		970.2
			39.3	970	Limestone, shaly				
		8	39.8	968.5	Shale, very limy, fossiliferous	61	1.11E+07		967.2
			41.8	968.0	Shale, gray, very firm	138	2.57E+08		963.8
		9		966.0					
			47.0	965	No recovery				
		10		960.8					
			52.5	960	Shaly limestone, gray	37	5280000		951.2
		11		955.3					
			57.2	955	Limestone, hard, gray, stylolytic seams				
			57.9	950.6	Limestone, hard, shaly, fossiliferous	358	1.46E+08		948.5
		12		950.0					
			62.2	950	Shale, sandy, light and dark gray varves				
		13		945.6					
				945					

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KANSAS DEPARTMENT OF TRANSPORTATION

Kansas Department of Transportation

RTE./CO.	I-635 / Wyandotte	SOUNDING NO.	CD 01	SHEET 3 of 4	
BRIDGE STA.	154+97.14	PROJ. NO.	635-105 KA-2093-01	BRIDGE NO.	1.05(326)
SITE NAME	Gibbs Rd over I-635			HOLE STA.	50+75, 47.0' Rt CL

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	N60 COUNT (SPT)	ELEVATION
NQ2 Diamond	Island Creek Shale Member	13		940	Shale, sandy, light and dark gray varves				
		14	69.4	938.4	Shale, dark gray, small white granules				
	Argentine Limestone Member		70.4	937.4	Limestone, hard, nearly white				
			71.7	936.1	Limestone, hard, gray, wavy-bedded, cherty				
		15		935		404	1.5E+08		933.9
			76.7	931.1	Limestone, hard, wavy-bedded @80.9 Void - Mine Ceiling				
		16		930					
			80.9	926.9	T.D. = 80.9				

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KANSAS DEPARTMENT OF TRANSPORTATION

Kansas Department of Transportation

RTE./CO.	I-635 / Wyandotte	SOUNDING NO.	CD 01	SHEET 4 of 4	
BRIDGE STA.	154+97.14	PROJ. NO.	635-105 KA-2093-01	BRIDGE NO.	1.05(326)
SITE NAME	Gibbs Rd over I-635			HOLE STA.	50+75, 47.0' Rt CL

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	N60 COUNT (SPT)	ELEVATION

Core	Depth	Elev.	Cut	Rec	Rec %	RQD
1	3.8	1004.0	4.0	2.3	58	25%
2	7.8	1000.0	5.0	5.0	100	50%
3	12.8	995.0	5.0	5.0	100	62%
4	17.8	990.0	5.0	5.0	100	22%
5	22.8	985.0	5.0	5.0	100	72%
6	27.8	980.0	5.0	5.0	100	82%
7	32.8	975.0	5.0	5.0	100	88%
8	37.8	970.0	5.0	5.0	100	98%
9	42.8	965.0	4.2	4.2	100	100%
10	47.0	960.8	5.5	0.0	0	0%
11	52.5	955.3	4.7	2.8	60	28%
12	57.2	950.6	5.0	5.0	100	98%
13	62.2	945.6	5.0	4.9	98	66%
14	67.2	940.6	4.5	4.5	100	89%
15	71.7	936.1	5.0	5.0	100	96%
16	76.7	931.1	4.2	4.2	100	98%
Total	**80.9**	**926.9**	**77.1**	**67.9**	**88**	**67%**